

# J. Patrick Lutz

Oberlin College  
119 Woodland Ave.  
Oberlin, OH 44074

patrick.lutz@oberlin.edu  
office: (440) 775-8300  
ORCID: 0000-0002-5795-5049

## EDUCATION AND PROFESSIONAL APPOINTMENTS

<b>Visiting Assistant Professor</b> , Oberlin College	2020–present
<b>Postdoctoral Scholar</b> , University of Michigan Advisor: Prof. Anne J. McNeil	2017–2020
<b>Ph.D. in Organic Chemistry</b> , Princeton University	09/2017
<b>M.A. in Organic Chemistry</b> , Princeton University Advisor: Prof. Abigail G. Doyle <i>Ni-Catalyzed Cross Coupling with Iminium Ions</i>	04/2014
<b>ACS-Certified B.S. in Chemistry</b> , <i>summa cum laude</i> , Hope College Research Advisor: Prof. Jeffrey B. Johnson <i>Mechanistic Investigations of C–C Activation in the Rh-Catalyzed Carboacylation of Quinolinyll Ketones</i>	05/2012

## RESEARCH EXPERIENCE

<b>Postdoctoral Scholar, Chemistry Department, University of Michigan</b>	2017–2020
<ul style="list-style-type: none"><li>Identified and synthesized new metastable polymers</li><li>Authored a review on the applications of catalyst-transfer polymerization</li></ul>	
<b>Graduate Research Assistant, Chemistry Department, Princeton University</b>	2012–2017
<ul style="list-style-type: none"><li>Developed an enantioselective, Ni-catalyzed cross coupling of arylzinc reagents with pyridinium ions</li><li>Developed a Ni-catalyzed, three-component, reductive cross coupling for synthesizing benzhydryl amines</li></ul>	
<b>Undergraduate Research Assistant, Chemistry Department, Hope College</b>	2010–2012
<ul style="list-style-type: none"><li>Studied the mechanism of Rh-catalyzed C–C activation in quinolinyll ketones</li><li>Elucidated reaction scope for the Ni-catalyzed addition of diorganozinc reagents to phthalimides</li></ul>	
<b>Undergraduate Research Assistant, Chemistry Department, Hope College</b>	Summer 2009
<ul style="list-style-type: none"><li>Studied the inhibitory effects of lead on erythropoietic transcription factor GATA-1 with Prof. Michael J. Pikaart</li></ul>	

## TEACHING EXPERIENCE

<b>Visiting Assistant Professor, Department of Chemistry and Biochemistry, Oberlin College</b>	Fall 2020
<ul style="list-style-type: none"><li>Teaching organic chemistry lecture and lab courses</li><li>Preparing and delivering lecture content virtually in response to the COVID-19 pandemic</li></ul>	
<b>Instructor for Organic Chemistry I and II Lab, University of Michigan</b>	Fall 2019, Spring 2018
<ul style="list-style-type: none"><li>Delivered weekly lectures to ~300 students as instructor of record</li><li>Oversaw lab sections taught by 11–15 TAs</li></ul>	
<b>Mentor for Postdoctoral Short Course on Teaching and Learning in STEM, U. of Michigan</b>	Winter 2019
<ul style="list-style-type: none"><li>Graded and provided written feedback to participants on course activities</li><li>Facilitated practice teaching demonstrations for course participants</li></ul>	
<b>McGraw Graduate Teaching Fellow, Princeton University</b>	2015–2017
<ul style="list-style-type: none"><li>Led teaching orientation for first-time TAs</li><li>Acted as a peer observer for discussion sections/labs</li></ul>	

<b>Course Advisor for Organic Chemistry I and II, Princeton University</b>	2015–2016
<ul style="list-style-type: none"><li>Assisted in redesigning discussion sections as small group problem-solving sessions</li><li>Wrote problem sets for use in these discussion sections</li></ul>	
<b>Review Session Leader, McGraw Center for Teaching and Learning, Princeton University</b>	Spring 2015
<ul style="list-style-type: none"><li>Designed and led review sessions for sophomore organic chemistry course</li></ul>	
<b>Assistant-in-Instruction for Organic Chemistry I and II, Princeton University</b>	2013–2014
<ul style="list-style-type: none"><li>Planned and led discussion sections</li><li>Wrote problem sets and exam questions</li></ul>	
<b>Teaching Assistant for Organic Chemistry I and II Laboratory, Hope College</b>	2011–2012
<b>Peer Tutor for Organic Chemistry I and II, Hope College</b>	2010–2012

## PUBLICATIONS

- Lutz, J. P.;** Davydovich, O.; Hannigan, M. D.; Moore, J. S.; Zimmerman, P. M.; McNeil, A. J. "Functionalized and Degradable Polyphthalaldehyde Derivatives." *J. Am. Chem. Soc.* **2019**, *141*, 14544–14548.
- Lutz, J. P.;** Hannigan, M. D.; McNeil, A. J. "Polymers Synthesized via Catalyst-Transfer Polymerization and Their Applications." *Coord. Chem. Rev.* **2018**, *376*, 225–247.
- Heinz, C.\*; **Lutz, J. P.\*;** Simmons, E. M.; Miller, M. M.; Ewing, W. R.; Doyle, A. G. "Ni-Catalyzed Carbon–Carbon Bond-Forming Reductive Amination." *J. Am. Chem. Soc.* **2018**, *140*, 2292–2300. \*Equal contribution.
- Lutz, J. P.;** Chau, S. T.; Doyle, A. G. "Nickel-Catalyzed Enantioselective Arylation of Pyridine." *Chem. Sci.* **2016**, *7*, 4105–4109.
- Dennis, J. M.; Calyore, C. M.; Simmons, J. M.; **Lutz, J. P.;** Gair, J. J.; Johnson, J. B. "Nickel-Catalyzed Addition of Diorganozinc Reagents to Phthalimides: The Selective Formation of Gamma-Hydroxylactams." *Synlett* **2013**, *24*, 2567–2570.
- Chau, S. T.; **Lutz, J. P.;** Wu, K.; Doyle, A. G. "Nickel-Catalyzed Enantioselective Arylation of Pyridinium Ions: Harnessing an Iminium Ion Activation Mode." *Angew. Chem. Int. Ed.* **2013**, *52*, 9153–9156.
- Lutz, J. P.;** Rathbun, C. M.; Stevenson, S. S.; Powell, B. M.; Boman, T. S.; Baxter, C. E.; Zona, J. M.; Johnson, J. B. "The Rate Limiting Step of the Rh-Catalyzed Carboacylation of Alkenes: C–C Bond Activation or Migratory Insertion?" *J. Am. Chem. Soc.* **2012**, *134*, 715–722.

## PRESENTATIONS

- Lutz, J. P.;** McNeil, A. J. "Designing Functional and Degradable Polyphthalaldehyde Derivatives." 46<sup>th</sup> National Organic Symposium, Bloomington, IN, June 26, 2019 (poster).
- Lutz, J. P.;** Davydovich, O.; Moore, J. S.; McNeil, A. J. "Designing Functional and Degradable Polyphthalaldehyde Derivatives." 2<sup>nd</sup> Detroit Polymer Symposium, Detroit, MI, November 30, 2018 (poster).
- Lutz, J. P.;** Heinz, C. H.; Doyle, A. G. "Nickel-Catalyzed Reductive Coupling of Iminium Ions." 8<sup>th</sup> Chicago Organic Symposium, Chicago, IL, September 30, 2017 (poster).
- Lutz, J. P.;** Chau, S. T.; Doyle, A. G. "Ni-Catalyzed, Enantioselective Arylation of Pyridinium Ions." 252<sup>nd</sup> ACS National Meeting, Philadelphia, PA, August 21, 2016 (oral).
- Lutz, J. P.;** Doyle, A. G. "Ni-Catalyzed, Enantioselective Arylation of Pyridinium Ions." ACS Division of Organic Chemistry 2016 Graduate Research Symposium, Bryn Mawr, PA, July 28, 2016 (oral).

6. **Lutz, J. P.**; Chau, S. T.; Doyle, A. G. "Enantioselective Arylation of Pyridinium Ions." 44<sup>th</sup> National Organic Symposium, College Park, MD, June 28, 2015 (poster).
7. **Lutz, J. P.**; Rathbun, C. M.; Johnson, J. B. "Mechanistic Investigations of Alkene Carboacylation via C–C Bond Activation in Quinolinyl Ketones." 243<sup>rd</sup> ACS National Meeting, San Diego, CA, March 28, 2012 (poster).
8. **Lutz, J. P.**; Johnson, J. B. "Mechanistic Studies of C–C Bond Activation in Quinolinyl Ketones: A Little Healthy Competition." Regional Chemistry REU Symposium, Holland, MI, July 30, 2010 (poster).
9. Damon, C. C.; **Lutz, J. P.**; Pikaart, M. J. "Inhibitory Effects of Lead on Erythropoietic Transcription Factor GATA-1." Summer Undergraduate Research Regional Symposium, Notre Dame, IN, July 31, 2009 (poster).

## MENTORING EXPERIENCE

<b>Maiko Lunn, first-year graduate student at Michigan</b>	Fall 2019
<b>Ricky Williams, high school junior</b>	Summer 2016
<ul style="list-style-type: none"><li>• Currently an undergraduate at Harvard (electrical engineering)</li></ul>	
<b>Jake Essman, undergraduate sophomore/junior</b>	2015–2017
<ul style="list-style-type: none"><li>• Currently a graduate student at Harvard (chemistry)</li></ul>	

## AWARDS, HONORS, AND FUNDING

<b>Bristol-Myers Squibb Fellow</b>	Fall 2016
<ul style="list-style-type: none"><li>• Research project on reductive cross coupling of iminium ions was selected as being of interest to BMS</li><li>• Presented monthly research updates to BMS scientists</li><li>• Performed high-throughput experimentation at BMS</li></ul>	
<b>Arthur A. Patchett '51 Graduate Fellowship in Chemistry (Princeton University)</b>	Spring 2016
<ul style="list-style-type: none"><li>• Awarded annually to an outstanding senior graduate student in organic chemistry</li></ul>	
<b>Hubert Alyea '24 Teaching Award (Princeton University)</b>	Spring 2014
<ul style="list-style-type: none"><li>• Awarded annually to the most outstanding teaching assistant in the chemistry department</li></ul>	
<b>NSF Graduate Research Fellowship</b>	Spring 2013
<ul style="list-style-type: none"><li>• "Directed Enantioselective Negishi Cross Coupling of Pyridinium Salts"</li></ul>	
<b>Dr. Almon T. Godfrey Prize in Chemistry (Hope College)</b>	Spring 2012
<ul style="list-style-type: none"><li>• Awarded annually to the top senior chemistry major</li></ul>	
<b>NSF Graduate Research Fellowship Honorable Mention</b>	Spring 2012
<ul style="list-style-type: none"><li>• "Rh-Catalyzed C-C Activation of Quinolinyl Imines: Towards Intermolecular Carboacylation"</li></ul>	
<b>Phi Beta Kappa</b>	Spring 2012
<b>Sigma Xi Research Award</b>	Spring 2012
<b>ACS Division of Inorganic Chemistry Undergraduate Award in Inorganic Chemistry</b>	Spring 2011
<ul style="list-style-type: none"><li>• Awarded annually to the top student in inorganic chemistry at Hope College</li></ul>	
<b>Organic Chemistry Book Award (Hope College)</b>	Spring 2010
<ul style="list-style-type: none"><li>• Awarded annually to the top student in organic chemistry</li></ul>	

<b>Dean's Summer Research Award (Hope College)</b>	Spring 2010
<b>General Chemistry Book Award (Hope College)</b>	Spring 2009
<ul style="list-style-type: none"><li>Awarded annually to the top student in general chemistry</li></ul>	
<b>National Merit Scholarship</b>	2008–2012

#### ACTIVITIES AND AFFILIATIONS

<b>Skype a Scientist participant</b>	2020–present
<ul style="list-style-type: none"><li>“Matched” with three classrooms to date to describe career and answer student questions</li></ul>	
<b>Volunteer for chemistry outreach activities at Lenawee County Fair</b>	2019
<ul style="list-style-type: none"><li>Organized and led hands-on chemistry activities for 4H Club youth</li></ul>	
<b>Volunteer for F.E.M.M.E.S. Capstone, University of Michigan</b>	2018–2019
<ul style="list-style-type: none"><li>Led hands-on polymer activities for 4<sup>th</sup>–6<sup>th</sup> grade girls at biannual event</li></ul>	
<b>McGraw Graduate Teaching Award Selection Committee, Princeton University</b>	2017
<b>Volunteer for National Chemistry Week activities, Princeton University</b>	2015–2016
<ul style="list-style-type: none"><li>Led hands-on chemistry activities for elementary and middle school–aged students at annual event</li></ul>	
<b>Volunteer for Super Science Saturday, NJ State Museum, Trenton, NJ</b>	2013–2016
<ul style="list-style-type: none"><li>Led hands-on chemistry activities for elementary and middle school–aged students at annual event</li></ul>	
<b>Chemistry Graduate Student Organization member, Princeton University</b>	2012–2017
<b>American Chemical Society member, Organic Division</b>	2012–present
<b>Chemistry Club member, Hope College</b>	2008–2012

#### REFERENCES

Academic references are available upon request.